These formulae will also serve to give an idea of the constitution of the anthocyanidins. The flavonols and flavones are well known yellow pigments of plants. Our thorough knowledge of the chemistry of these pigments is partly due to their extensive use in the dyeing industry. WHELDALE[16] has suggested that anthocyanins originate from the flavonol glucosidic pigments by a process of hydrolysis followed by oxidation, and she questions EVEREST's ideas as set forth above, so far as they apply to the origin of anthocyanins in plants, since the drastic reagents used by EVEREST are not available for the plant. It would seem that her protest is rather poorly grounded.

Almost every point established concerning the anthocyanins is of great immediate significance to plant breeders and physiologists. WILLSTÄTTER and his students have done much to put our knowledge of this group of pigments on solid foundations, as they previously did for the pigments of the chloroplast.—WM. CROCKER.

Anatomy of Isoetes.—LANG,[17] in continuing his studies of *Isoetes*, has analyzed the stele of *I. lacustris*, with the help of apical development. The contradictory interpretations of the stem of *Isoetes* have arisen from complications due to the occurrence of crowded leaves upon a very slightly elongating axis, accompanied by the continued growth of the cortex. The summary of the analysis is as follows, proceeding from within outward: (1) central column of primary xylem (the strictly cauline region of the stem); (2) peripheral zone of xylem, consisting of bases of leaf traces connected with the central cylinder and radially arranged xylem between the entering leaf traces; (3) parenchymatous xylem sheath, continuous with similar region in leaf trace; (4) primary phloem, continuous with phloem of leaf trace; (5) secondary prismatic tissue, consisting of tracheids, sieve tubes, or parenchyma; (6) meristen of secondary prismatic tissue; (7) cortical tissue. LANG states that such an analysis of the stele of *Isoetes* "not only affords points for comparison with the Lepidodendreae, but promises to be of interest from the standpoint of general stelar morphology."—J. M. C.

Espeletia.—This is a genus of the Asteraceae, restricted so far as known to the high cordilleras of Colombia and Venezuela. The genus is among the most conspicuous of the composites, the leaves and inflorescences in most of the species being closely invested by long wool. The genus has just been revised by STANDLEY,[18] who recognizes 17 species, 6 of which are described as new.—J. M. C.

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[16] Jour. Genetics 4:369–376. 1915.

[17] LANG, WILLIAM H., Studies in the morphology of *Isoetes*. II. The analysis of the stele of the shoot of *Isoetes lacustris* in the light of mature structure and apical development. Mem. and Proc. Manchester Lit. and Phil. Soc. **59**:29–56. *pls. 4. figs. 7.* 1915.

[18] STANDLEY, PAUL C., The genus *Espeletia*. Amer. Jour. Bot. **2**:468–485. *figs. 6.* 1915.